



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

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www.miamidade.gov/economy

Johns Manville Corporation
717 17th Street
Denver, CO 80202

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Johns Manville APP Modified Bitumen Roofing Systems over Recover Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews and revises NOA No. 12-0123.05 and consists of pages 1 through 21.
The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 13-0129.06
Expiration Date: 06/28/16
Approval Date: 06/13/13
Page 1 of 21

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Modified Bitumen
Materials: APP
Deck Type: Recover
Maximum Design Pressure: See Specific Deck Types

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
JM APP Base	39-3/8" x 48'	ASTM D 6509	APP modified asphalt, fiberglass reinforced, smooth surfaced base sheet.
APPeX 4S	39-3/8" x 34'	ASTM D 6222 Type I Grade S	APP modified asphalt, polyester reinforced, smooth surfaced membrane for use as a Base and/or Ply Sheet only.
APPeX 4.5M	39-3/8" x 34'	ASTM D 6222 Type I Grade G	APP modified asphalt, polyester reinforced, mineral surfaced membrane.
APPeX 4.5M FR	39-3/8" x 34'	ASTM D 6222 Type I Grade G	APP modified asphalt, polyester reinforced, fire-retardant, mineral surfaced membrane.
Tricor MFR	39-3/8" x 34'	ASTM D 6223	APP modified asphalt, polyester / glass reinforced, granule surfaced membrane.
Tricor S	39-3/8" x 34'	ASTM D 6223	APP modified asphalt, polyester / glass reinforced, smooth surfaced membrane for use as a Base and/or Ply Sheet only.
GlasPly Premier	36" x 180'	ASTM D 2178 Type VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasPly IV	36" x 180'	ASTM D 4601 Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
PermaPly 28	36" x 106'; 72 lb. roll	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet
Ventsulation	36" x 36'	ASTM D 4897 Type II	Heavy duty fiber glass base sheet impregnated and coated on both sides with asphalt with or without fine mineral stabilizer.
GlasBase Plus	36" x 106'	ASTM D 4601	Type II SBS and asphalt blend impregnated and coated glass fiber base sheet with fine mineral stabilizer.



APPROVED INSULATIONS:

TABLE 2		
Product Name	Product Description	Manufacturer (With Current NOA)
ENRGY 3, ENRGY 3 25 PSI	Isocyanurate Insulation.	Johns Manville
Fesco Foam, DuraFoam	Isocyanurate Insulation with perlite facer.	Johns Manville
Retro-Fit Board, DuraBoard	High-density perlite roof insulation.	Johns Manville
Fesco Board	Rigid perlite roof insulation board.	Johns Manville
Structodek® High Density Fiber Board Roof Insulation	High Density Fiber Board.	Blue Ridge Fiber Board, Inc.

APPROVED FASTENERS:

TABLE 3				
Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	UltraFast Fastener	Insulation fastener for wood and steel.		Johns Manville
2.	UltraFast 3" Round Metal Plate or UltraFast Square Recessed Metal Plate	Galvalume AZ55 steel plate	3" round 3" square	Johns Manville
3.	UltraFast Plastic Plate	Polypropylene round plate	3" round	Johns Manville
4.	Structural Concrete Fastener	Insulation fastener for concrete decks.		Johns Manville
5.	Twin Loc-Nail	Base sheet fastener with integrated Plate.	2.7" dia. plate	ES Products, Inc.
6.	CD-10	Insulation fastener for concrete decks.		OMG, Inc.
7.	Fluted Nail	Insulation fastener for concrete decks.		OMG, Inc.
8.	OMG Roofgrip #12 or OMG Heavy Duty (#14)	Insulation fastener for wood, steel and concrete decks.		OMG, Inc.
9.	ASAP Roofgrip	Pre-assembled Insulation fastener and plate.		OMG, Inc.
10.	OMG Plastic Plate	Polypropylene plastic plate	3.25" round	OMG, Inc.
11.	OMG 3" Round Metal Plate	Galvalume AZ50 steel plate	3" round	OMG, Inc.
12.	TruFast HD Fastener (#14)	Insulation fastener for concrete decks		Altenloh, Brinck & Co. U.S., Inc.
13.	Tru-Fast CF Tap Grip	Insulation fastener for concrete decks		Altenloh, Brinck & Co. U.S., Inc.



APPROVED FASTENERS:**TABLE 3**

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
14.	Tru-Fast 3" Metal Insulation Plate	Galvalume AZ55 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
15.	Tru-Fast Plastic Plates	Polyethylene plastic plate	3" round	Altenloh, Brinck & Co. U.S., Inc.

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	J.I. 0X0A9.AM	4470	03/25/94
	J.I. 0W6A2.AM	4470	02/05/93
	J.I. 0X7A4.AM	4470	08/26/93
	J.I. 3001482	4470	08/11/98
	J.I. 3002823	4470	04/01/99
	J.I. 3003468	4450	02/02/00
	J.I. 3007148	4470	04/19/00
	3009499	4470	04/04/01
	3011248	4450	11/01/02
Underwriters Laboratories, Inc.	3012974	4470	06/03/02
	R10167	UL 790	05/27/13
Exterior Research & Design, LLC	#4361-2.04.97-1	TAS 114(J)	04/15/97
	10390A.12.97-1	TAS 114(J)	12/15/97
	10390A.10.97-1	TAS 114(J)	10/15/97
	10391.01.03	TAS 114(J)	01/29/03
PRI Construction Materials, LLC	JMC-053-02-01	ASTM D5147/D6222	05/01/13
	JMC-054-02-01	ASTM D5147/D6223	06/04/12
	JMC-055-02-01	ASTM D 6509	05/29/12
	JMC-070-02-01	ASTM D 2178 TYPE IV	04/17/12
	JMC-071-02-01	ASTM D 2178 TYPE VI	04/17/12
	JMC-072-02-02	ASTM D 4601	06/04/12
	JMC-074-02-01	ASTM D 4897	04/17/12
	JMC-093-02-01	ASTM D 4601	08/02/12



APPROVED ASSEMBLIES

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: wood/steel/concrete/lightweight concrete

System Type A(1): Anchor sheet mechanically fastened; all layers of insulation fully adhered with approved asphalt.

All General and System limitations apply.

Anchor Sheet: *(Option #1 – wood deck only)* One ply of JM APP Base, PermaPly 28, Glasbase Plus, Ventsulation or Classic S mechanically fastened to the deck with approved nails and tin caps at a 4" side lap 9" o.c. and two rows staggered in the center of the sheet, 12" o.c.
(Maximum Design Pressure: -45 psf, See General Limitation #9.)

(Option #2 – wood, steel or concrete) One ply of JM APP Base, PermaPly 28, Glasbase Plus, Ventsulation or Classic S mechanically fastened to the deck with JM UltraFast, OMG Roofgrip or Tru-Fast metal plates and fasteners *(for wood, steel decks)* or with JM Structural Concrete Fastener, OMG Heavy Duty #14, Fluted Nail or CD-10 or Tru-Fast #14 or Tap-Grip fasteners with metal plates *(for concrete decks)* at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet 18" o.c.
(Maximum Design Pressure: -45 psf, See General Limitation #9.)

(Option #3 – wood, steel and concrete) Two or more plies of JM PermaPly 28 simultaneously fastened to the deck using JM Ultrafast fasteners *(for wood and steel)* or JM Ultrafast fasteners *(for concrete deck)* and Metal Plates spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.
(Maximum Design Pressure: -52.5 psf, See General Limitation #7.)

(Option #4 - Lightweight Concrete over steel or concrete) Two plies of JM PermaPly 28 simultaneously fastened to the deck using JM UltraFast fasteners and Metal Plates through the lightweight concrete to the steel or concrete deck spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.
(Maximum Design Pressure -75 psf; See General Limitation #7.)

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY 3, ENRGY 3 25 PSI Minimum 1.4" thick	N/A	N/A
Fesco Foam, DuraFoam Minimum 1.5" thick	N/A	N/A
Fesco Board Minimum ¾" thick	N/A	N/A
Retro-Fit Board, DuraBoard Minimum ½" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAs 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet:	One ply of JM PermaPly 28 fully adhered to the insulated substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq.
Ply Sheet:	(Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.
Membrane:	One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.
Surfacing:	<p>(Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.</p> <ol style="list-style-type: none">1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.
Maximum Design Pressure:	See Anchor Sheet Options.

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: wood/steel/concrete/lightweight concrete/cementitious wood fiber/gypsum

System Type A(2): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI Minimum 1.4" thick	N/A	N/A
Fesco Foam, DuraFoam Minimum 1.5" thick	N/A	N/A
Fesco Board Minimum ¾" thick	N/A	N/A
Retro-Fit Board, DuraBoard Minimum ½" thick	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of JM PermaPly 28 fully adhered to the insulated substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: APP

Deck Type 7I: Recover

Deck Description: concrete

System Type A(3): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI ,Fesco Foam, DuraFoam Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DuraBoard Minimum ½" thick	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft2 Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: One ply of JM PermaPly 28 fully adhered to the insulated substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.

Maximum Design

Pressure: -305 psf (See General Limitation #9.)



Membrane Type: APP

Deck Type 7I: Recover

Deck Description: wood / steel / concrete

System Type B: Base layer of insulation mechanically attached, optional top layer adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI , Fesco Foam, DuraFoam		
Minimum 1.5" thick	1 or 4	1:1.33 ft²
Minimum 1.5" thick	1 or 4	1:2 ft²
Structodek		
Minimum 1.5" thick	1, 4 or 8	1:2.67 ft²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Retro-Fit Board, DuraBoard, Structodek		
Minimum ½" thick	N/A	N/A
Fesco Board		
Minimum ½" thick	N/A	N/A

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of JM PermaPly 28 fully adhered to the insulated substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.

Maximum Design

Pressure: -52.5 psf (for polyisocyanurate base insulation attached at 1 per 1.33 sq. ft.)
(See General Limitation #7.)
-45 psf (for all other applications) (See General Limitation #7.)

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: wood / steel / concrete

System Type C(1): All layers of insulation simultaneously attached.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

**ENRGY 3, ENRGY 3 25 PSI
Minimum 1.4" thick**

N/A

N/A

**Fesco Foam, DuraFoam
Minimum 1.5" thick**

N/A

N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

**Fesco Foam, DuraFoam (flat or tapered)
Minimum 1.5" thick**

1, 4, 6, 7, 8, 12 or 13

1:2 ft²

**Fesco Board
Minimum ¾" thick**

1, 4, 6, 7, 8, 12 or 13

1:2 ft²

**Retro-Fit Board, DuraBoard
Minimum ½" thick**

1, 4, 6, 7, 8, 12 or 13

1:2 ft²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of JM PermaPly 28 fully adhered to the insulated substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.

Maximum Design
Pressure:

-45 psf (See General Limitation #9.)

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: wood / steel / concrete

System Type C(2): Single insulation layer mechanically attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DuraBoard		
Minimum ½" thick	1	1:2 ft ²
Minimum 1" thick	1	1:3.2 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of JM PermaPly 28, GlasPly Premier or GlasPly IV fully adhered to the insulated substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq. or one ply of JM APP Base heat welded while maintaining 4" side laps and 6" end laps.

Ply Sheet: None.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: wood / steel / concrete

System Type C(3): Single insulation layer mechanically attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DuraBoard Minimum 1" thick	1	1:1.33 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of JM PermaPly 28, GlasPly Premier or GlasPly IV fully adhered to the insulated substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq. or one ply of JM APP Base heat welded while maintaining 4" side laps and 6" end laps.

Ply Sheet: None.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets.
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.

Maximum Design Pressure: -67.5 psf (See General Limitation #7.)

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: wood/steel/concrete

System Type D: All layers of insulation and base sheet simultaneously attached.

All General and System limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY 3, ENRGY 3 25 PSI Minimum 1.4" thick	N/A	N/A
Fesco Foam, DuraFoam Minimum 1.5" thick	N/A	N/A
Retro-Fit Board Minimum ½" thick	N/A	N/A
Fesco Board (flat or tapered) Minimum ¾" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: **(OPTION #1)** One ply of JM APP Base, PermaPly 28, Glasbase Plus or Ventsulation mechanically fastened through the insulation to the deck as described below.
(wood or steel decks) Fasten base sheet with JM UltraFast, OMG Roofgrip or Tru-Fast metal plates and fasteners at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet 18" o.c.
(concrete decks) Fasten base sheet with JM Structural Concrete Fastener, OMG CD-10, Fluted Nail or OMG #14 or Tru-Fast #14 or Tap-Grip fasteners with metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet 18" o.c.
(OPTION #2.) Two or more plies of JM PermaPly 28 Sheet mechanically attached through the insulation to the deck as described below:
Attach base sheet using JM Ultrafast fasteners *(for wood or steel)* or JM Structural Concrete Fastener fasteners *(for concrete)* and Metal Plates spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

- Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.
- Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.
- Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
 2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
 3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.
- Maximum Design Pressure:
- 45 psf (for Base Sheet Option #1.) (See General Limitation #9.)
 - 97.5 psf (for Base Sheet Option #2, steel or concrete deck with JM GlasBase only) (See General Limitation #7.)
 - 52.5 psf (for Base Sheet Option #2, wood deck applications) (See General Limitation #7.)

Membrane Type: APP

Deck Type 7: Recover

Deck Description: wood/steel/concrete/lightweight concrete

System Type E(1): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: **(OPTION #1)** One ply of JM APP Base, PermaPly 28, Glasbase Plus or Ventsulation mechanically fastened to the deck as described below.
(Wood) Fasten anchor sheet with approved nails and tin caps at a 4" side lap 9" o.c. and two rows staggered in the center of the sheet 12" o.c.
(Wood or Steel) Fasten base sheet with JM UltraFast, OMG or Tru-Fast metal plates and fasteners at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet 18" o.c.
(Concrete) Fasten base sheet with JM Structural Concrete Fastener, OMG CD-10, Fluted Nail or OMG #14 or Tru-Fast #14 or Tap-Grip fasteners with metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet 18" o.c.

(OPTION #2) Two or more plies of JM PermaPly 28 simultaneously fastened to the deck as described below:
(Wood, Steel and Concrete) Attach base sheet using JM Ultrafast fasteners (*for wood and steel*) or JM Ultrafast fasteners (*for concrete deck*) and Metal Plates spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.
(Lightweight Concrete over steel or concrete) Attach base sheet using JM UltraFast fasteners and Metal Plates through the lightweight concrete to the steel or concrete deck spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.

Maximum Design

Pressure:

- 45 psf (for Base Sheet Option #1.) (See General Limitation #9.)
- 52.5 psf (for Base Sheet Option #2 – wood, steel or concrete deck.)
(See General Limitation #7.)
- 75 psf (for Base Sheet Option #2 – lightweight concrete deck.)
(See General Limitation #7.)

Membrane Type: APP

Deck Type 7: Recover

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type E(2): Base sheet mechanically fastened.

Base Sheet: One ply of PermaPly 28 fastened to the deck as described below.

Fastening: *(lightweight concrete decks):* Fasten base sheet with ES Products Twin Loc-Nail fasteners spaced 9" o.c. at the 4" side lap and two rows staggered 9" o.c. in the field.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.

Maximum Design Pressure: -60 psf (See General Limitation #7.)

Membrane Type: APP

Deck Type 7: Recover

Deck Description: wood/steel/concrete/lightweight concrete/cementitious wood fiber/gypsum

System Type F: Base sheet adhered with approved asphalt.

All General and System limitations apply.

Note: Substrate deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One ply of JM PermaPly 28 fully adhered to the primed substrate with approved mopping asphalt at an application rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of JM APP Base or APPeX 4S heat welded to base sheet while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing: (Optional) Install one of the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.
2. Karnak 97, Karnak 97 AF, Monsey Premium Long Life Aluminum Roof Coating Asbestos Free or Monsey Prograde Aluminum, Grundy AL MB aluminum coating at a rate of 1-1/2 gal/sq Monsey Aquabrite, Gardner asphalt emulsion, APOC Sunbright 400 or Henry 229 Aluminum Emulsion at 2½ gal/sq or APOC 212 Aluminum Roof Coating at 3 gal/sq.
3. Grundy 20 F asphalt emulsion, Endure Asphalt Emulsion, APOC 302 or 302 AF applied at 2½ gal/sq with optional 60 lbs./sq. of roofing granules embedded in wet coating.

Maximum Design Pressure: -305 psf (See General Limitation #9.)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 13-0129.06
Expiration Date: 06/28/16
Approval Date: 06/13/13
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